

Request for Continued Examination (RCE) Transmittal

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Commissioner for Patents
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Alexandria, VA 22313-1450

Application Number	10/798,693
Filing Date	03/11/2004
First Named Inventor	Stanton
Art Unit	3673
Examiner Name	LEE
Attorney Docket Number	CLPS-18789

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.

Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. **Submission required under 37 CFR 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

- a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.
- i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ii. ☐ Other _____
- b. ☒ Enclosed
- i. ☒ Amendment/Reply
- ii. ☐ Affidavit(s)/ Declaration(s)
- iii. ☐ Information Disclosure Statement (IDS)
- iv. ☐ Other _____

2. Miscellaneous


- a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)
- b. ☐ Other _____

3. Fees

- The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.
The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 50-3037.
- a. ☒ RCE fee required under 37 CFR 1.17(e)
- i. ☒ RCE fee required under 37 CFR 1.17(e)
- ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)
- iii. ☐ Other _____
- b. ☐ Check in the amount of \$ _____ enclosed
- c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	09/10/2009
Name (Print/Type)	Todd E. Albanesi	Registration No.	36,426

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature		Date	09/10/2009
Name (Print/Type)	Todd E. Albanesi		

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Application No.: 10/798,693
Date of Amendment: September 10, 2009
Date of Final Office Action: June 10, 2009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: : 10/798,693
Applicant : Eddie N. Stanton and Michael L. Strickland
Filed : 03/11/2004
TC/A.U. : 3673
Docket No. : CLPS-18789
Customer No. : 01224
Confirmation No. : 6180

RESPONSE TO OFFICE ACTION DATED JUNE 10, 2009

Mail Stop RCE
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action mailed June 10, 2009, a request for continued examination being made herewith, please amend the referenced application as follows:

Amendments to the Specification: Begin on page 2 of this paper.

Amendments to the Claims: A listing of the claims begins on page 3 of this paper.

Amendments to the Drawings: Replacement Sheets for Figures 4, 6, and 12.

Remarks begin on page 9 of this paper.

In the Specification:

[0145] As will be appreciated, the telescoping structures 212t and 222t of the first sleeve portion **212** and the second sleeve portion **222** allow for squeezing of the first abutment ring **214** and the second abutment ring **224** co-axially closer to one another after positioning the pre-assembled packing cartridge **200** on a plunger **38** in the packing bore **28**. This axial squeezing is initially provided by the gland nut **32** (not shown in **Figure 4**). The gland nut initially can be tightened to the specifications of the packing elements **42**. In addition, from time to time, the gland nut can be tightened further to further squeeze the packing elements **42** in compensation for wear during operation of the pump. Preferably, these telescoping structures 212t and 222t allow for at least sufficient overlapping travel in areas **212a** and **222a** to allow for the expected crushing of packing during the operation of a plunger **38** though the packing cartridge **200**. For example, the expected crush of the packing rings may be about 0.4 inches.

[0146] Preferably, a spacer ring **245** is positioned operatively to cover the overlapping travel of inwardly exposed area **222a** of the telescoping structures 212t and 222t between the first and second sleeve portions **210** and **220**. This spacer ring **245** helps prevent seepage of fluid into any clearances between the first sleeve portion **210** and the second sleeve portion **220**. The spacer ring **245** can also act as a back-up ring for the packing rings **42**.

[0156] Preferably, a spacer ring **445** is positioned operatively to cover the overlapping travel of the telescoping structures 422t and 412t between the first and second sleeve portions **410** and **420**. This spacer ring **445** helps prevent seepage of fluid into any clearances between the first sleeve portion **410** and the second sleeve portion **420**. The spacer ring **445** can also act as a back-up ring for the packing rings **42**.

[0158] As will be appreciated, the telescoping structures 422t and 412t of the first sleeve portion **412** and the second sleeve portion **422** allow for squeezing of the first abutment ring **414** and the second abutment ring **424** co-axially closer to one another after positioning the pre-assembled packing cartridge **400** on a plunger **38** in the packing bore **28**. However, in this embodiment, the packing cartridge **400** is positioned in the packing bore **28** and tightened by a gland nut (not shown) until the second sleeve portion **422** bottoms out against a shoulder **416** of the first sleeve portion **412**. In this position, the coil spring **462** is compressed with a packing assembly positioned between the first abutment ring **414** and a second abutment ring **424**. The advantage of bottoming out the telescoping structures 422t and 412t is that it prevents over-tightening of the packing cartridge **400** in the packing bore **28**. The spring **462** maintains a pre-determined amount of axial compression on the packing rings **42** of the packing stack.

In the Claims:

1. (Currently Amended) A packing cartridge for use in a packing bore of a plunger-type pump, wherein the packing bore has a generally cylindrical interior wall and a seat and a removable gland, the packing cartridge comprising:
 - a. a generally-cylindrical sleeve having an outer cylindrical profile adapted to be at least partially positioned in the packing bore;
 - b. a first abutment ring positioned in the sleeve;
 - c. a second abutment ring positioned in the sleeve and co-axially spaced apart from the first abutment ring;
 - d. telescoping structures operatively positioned between the first abutment ring and the second abutment ring to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another; and
 - e. a retaining ring operatively positioned between the telescoping structures to retain the telescoping structures together and to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another;

wherein the packing cartridge is adapted to be positioned in the packing bore between the seat and the removable gland and so that the squeezing of the first abutment ring and the second abutment ring closer together can be provided by tightening the removable gland over the packing cartridge.
2. Canceled.
3. (Original) The packing cartridge according to Claim 2, wherein the telescoping structures have at least sufficient overlapping travel to allow for the expected crushing of packing during the operation of a plunger through the packing cartridge.
4. (Original) The packing cartridge according to Claim 2, further comprising: a spring operatively positioned between the first abutment ring and the second abutment ring.
5. (Original) The packing cartridge according to Claim 4, wherein the telescoping structures have at least sufficient overlapping travel to help maintain the first abutment ring and second abutment ring in substantial co-axial alignment while the spring is anywhere between a substantially relaxed condition and a substantially compressed condition.

6. (Previously Amended) The packing cartridge according to Claim 1, wherein the sleeve further comprises a first sleeve portion and a second sleeve portion, and wherein the telescoping structures are a part of the first and second sleeve portions.
7. (Previously Amended) The packing cartridge according to Claim 6, wherein the first sleeve portion is adapted to be positioned in at least a portion of the packing bore; and the second sleeve portion has at least a portion thereof telescopically positioned in at least a portion of the first sleeve portion.
8. (Original) The packing cartridge according to Claim 6, wherein the first abutment ring is operatively connected to the first sleeve portion and the second abutment ring is operatively connected to the second sleeve portion.
9. (Original) The packing cartridge according to Claim 6, wherein the first abutment ring is integrally formed with the first sleeve portion and the second abutment ring is integrally formed with the second sleeve portion.
10. (Currently Amended) The packing cartridge according to Claim 6, further comprising a spacer ring operatively positioned to cover the overlapping travel of the telescoping structures between the first and second sleeve portions, wherein the spacer ring is positioned to help prevent seepage of fluid into any clearances between the first sleeve portion and the second sleeve portion.
11. (Previously Amended) The packing cartridge according to Claim 1, wherein the telescoping structures are a part of the sleeve and one of the first and second abutment rings.
12. (Original) The packing cartridge according to Claim 11, wherein the other one of the first and second abutment rings is integrally formed with the sleeve.
13. (Original) The packing cartridge according to Claim 1, wherein the retaining ring comprises a resilient ring adapted to be positioned in a groove in one of the telescoping structures, whereby the resilient ring frictionally engages the other telescoping structure to resist separation of the telescoping structures.

14. Canceled.

15. (Currently Amended) ~~[[A]]~~ The packing cartridge according to Claim 1, further comprising: packing positioned between the first abutment ring and the second abutment ring.

16. (Currently Amended) The packing cartridge according to Claim 15, wherein the packing further ~~comprising~~ comprises a plurality of packing elements.

17. (Original) The packing cartridge according to Claim 16, wherein at least one packing spacer is positioned between any two of the plurality of packing elements.

18 – 64. Canceled.

65. (Currently Amended) A packing cartridge for use in a packing bore of a plunger-type pump, wherein the packing bore has a generally cylindrical interior wall and a seat and a removable gland, the packing cartridge comprising:

- a. a first element comprising:
 - i. a first sleeve portion adapted to be positioned in at least a portion of the packing bore; and
 - ii. a first abutment ring positioned to extend inwardly and substantially circumferentially relative to the first sleeve portion; and
- b. a second element comprising:
 - i. a second sleeve portion having at least a portion thereof telescopically positioned in at least a portion of the first sleeve portion; and
 - ii. a second abutment ring positioned to extend inwardly and substantially circumferentially relative to the second sleeve portion; and
- c. a means for axially retaining the first and second sleeve portions together;
 - wherein the first sleeve portion and the second sleeve portion and the means for axially retaining are operatively positioned between the first abutment ring and the second abutment ring to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another; and
 - wherein the packing cartridge is adapted to be positioned in the packing bore between the seat and the removable gland and so that the squeezing of the first abutment

ring and the second abutment ring closer together can be provided by tightening the removable gland over the packing cartridge.

66. (Currently Amended) The packing cartridge according to Claim 65, further comprising a spacer ring operatively positioned to cover the overlapping travel of the first and second sleeve portions, wherein the spacer ring is positioned to help prevent seepage of fluid into any clearances between the first sleeve portion and the second sleeve portion.

67 – 75. Canceled.

76. (Previously Amended) The packing cartridge according to Claim 65, further comprising: a spring operatively positioned between the first abutment ring and the second abutment ring.

77. Canceled.

78. (Original) The packing cartridge according to Claim 76, wherein the telescoping first and second sleeve portions have at least sufficient overlapping travel to help maintain the first abutment ring and second abutment ring in substantial co-axial alignment while the spring is anywhere between a substantially relaxed condition and a substantially compressed condition.

79. (Currently Amended) [[A]] The packing cartridge according to Claim 65, further comprising: packing positioned between the first abutment ring and the second abutment ring.

80. (Currently Amended) The packing cartridge according to Claim 79, wherein the packing further ~~comprising~~ comprises a plurality of packing elements.

81. (Original) The packing cartridge according to Claim 80, wherein at least one packing spacer is positioned between any two of the plurality of packing elements.

82. (Previously Amended) The packing cartridge according to Claim 65, wherein the first abutment ring is integrally formed with the first sleeve portion and the second abutment ring is integrally formed with the second sleeve portion.

83 – 129. Canceled.

130. (Currently Amended) The packing cartridge according to Claim ~~[[128]]~~ 65, wherein the means for axially retaining comprises:

a. a retaining groove and an interference surface cooperatively positioned between the first and second sleeve portions; and

b. a resilient ring positioned in the retaining groove for frictionally engaging the interference surface, whereby when the resilient ring in the retaining groove is moved axially against the interference surface, the resilient ring frictionally engages the interference surface and resists separation of the first and second sleeve portions.

131. Canceled.

132. (Previously Presented) The packing cartridge according to Claim 1, wherein the telescoping structures and the retaining ring are operative to allow a packing to be held in a pre-assembled but relaxed condition.

133. Canceled.

134. (Currently Amended) The packing cartridge according to Claim 65, ~~further comprising a means for axially retaining the first and second sleeve portions together;~~ wherein the first and second sleeve portions and the means for axially retaining are operative to allow a packing to be held in a pre-assembled but relaxed condition.

135. (Currently Amended) A packing cartridge for use in a packing bore of a plunger-type pump, wherein the packing bore has a generally cylindrical interior wall and a seat and a removable gland, the packing cartridge comprising:

a. a generally-cylindrical sleeve having an outer cylindrical profile adapted to be at least partially positioned in the packing bore;

b. a first abutment ring positioned in the sleeve;

c. a second abutment ring positioned in the sleeve and co-axially spaced apart from the first abutment ring;

d. packing positioned between the first abutment ring and the second abutment ring;

e. telescoping structures operatively positioned between the first abutment ring and the second abutment ring to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another; and

f. a retaining ring operatively positioned between the telescoping structures to retain the telescoping structures together and to allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another;

wherein the packing cartridge is adapted to be positioned in the packing bore between the seat and the removable gland and so that the squeezing of the first abutment ring and the second abutment ring closer together can be provided by tightening the removable gland over the packing cartridge; and

wherein the telescoping structures and the retaining ring are operative to allow the packing to be held in a pre-assembled but relaxed condition.

136. (Previously Presented) The packing cartridge according to Claim 135, further comprising: a spring operatively positioned between the first abutment ring and the second abutment ring.

137. (Previously Presented) The packing cartridge according to Claim 136, wherein the telescoping structures have at least sufficient overlapping travel to help maintain the first abutment ring and second abutment ring in substantial co-axial alignment while the spring is anywhere between a substantially relaxed condition and a substantially compressed condition.

138. (Previously Presented) The packing cartridge according to Claim 137, wherein the sleeve further comprises a first sleeve portion and a second sleeve portion, and wherein the telescoping structures are a part of the first and second sleeve portions.

139. (Currently Amended) The packing cartridge according to Claim 138, further comprising a spacer ring operatively positioned to cover the overlapping travel of the telescoping structures between the first and second sleeve portions, wherein the spacer ring is positioned to help prevent seepage of fluid into any clearances between the first sleeve portion and the second sleeve portion.

REMARKS

The examiner's attention to this lengthy application is appreciated. Reconsideration is respectfully requested.

Status of Claims

Claims 1, 3–13, 15–17, 65–66, 76, 78–82, 130, 132, 134–139 are currently pending. The other claims are canceled without prejudice and to simplify the issues for any necessary appeal.

Current Claim Clarifications

Independent Claims 1, 65, and 135 are currently amended to include that the packing bore additionally has a “removable gland” as described throughout the specification, including, for example, in Paragraphs 0023–0025, 0100–0101, and 0184–0186 and with reference Figures 1, 2, and 10, where Figure 10 illustrates one of the embodiments according to the invention in the packing bore 28 of a pump, including showing a gland nut 32 positioned over the packing cartridge.

Independent Claims 1, 65, and 135 are currently amended to clarify that “the packing cartridge is adapted to be positioned in the packing bore between the seat and the removable gland and so that the squeezing of the first abutment ring and the second abutment ring closer together can be provided by tightening the removable gland over the packing cartridge.” Support for this amendment is found throughout the specification and drawing, for example, Paragraphs 0116–0118, 0126, 0136–0137, 0142, 0145, 0149, 0158, 0159, 0171, 0176, 0178, 0182–0183, 0186, and 0236.

Independent Claim 65 is amended to include “a means for axially retaining the first and second sleeve portions together,” which had been previously included in a now canceled claim which was dependent from Claim 65.

Independent Claims 1, 65, and 135 are amended additionally to clarify that the retaining ring or the retaining means “allow for squeezing of the first abutment ring and second abutment ring co-axially closer to one another.” Support for this amendment is found throughout the specification and drawing, for example, Paragraphs 0140–0141 and originally-filed dependent Claims 2, 67, 69, and 75.

Dependent Claims 10, 66, and 139 are amended to clarify that “the spacer ring is positioned to help prevent seepage of fluid into any clearances between the first sleeve portion and the second sleeve portion.” Support for this amendment is found throughout the specification, including, for example, in Paragraphs 0146 and 0156 and with reference to Figures 4, 6, 7, and 12.

Dependent Claims 15 and 79 are corrected as suggested by the Examiner.

Dependent Claims 16 and 80 are amended to correct a grammatical error.

Dependent Claims 130 and 134 are amended to correct antecedent basis.

No new matter is being added to the claims.

Prior Election/Restrictions

In response to the prior Office Action dated September 12, 2005 regarding a restriction requirement, on October 11, 2005 Applicants advised that none of the then-pending claims were generic to all of the patentably distinct Species I through XIV as outlined in that Office Action. Applicants noted, however, that independent Claim 65 is generic to the plurality of disclosed patentably distinct Species I through XII (i.e., Figures 3 through 14a).

In response to the requirement to elect a single disclosed Species, Applicants previously elected Species X (i.e., Figures 12 and 12a). All the currently-pending claims are believed to read on the elected Species X (i.e., Figures 12 and 12a).

Specification and Drawing

In response to objections to the drawing under 37 CFR 1.83(a), Applicants amend the specification to include references and submit Replacement Sheets for Figures 4, 6, and 12.

The drawings were objected to under 37 CFR 1.83(a) because the specific terms “telescoping structures” as used in the currently- pending claims were not identified in the drawings. Applicants amend as required by the Examiner.

Regarding Figure 4, Paragraphs 0145 and 0146 of the specification are amended to include the specific references 212t and 222t for the “telescoping structures” and Figure 4 of the drawing is amended to include these references. Further support for these amendments is found in the specification, for example, in Paragraph 0145:

The packing cartridge 200 further includes, without limitation, a second element 220 comprising a second sleeve portion 222 having at least a portion thereof telescopically positioned in at least a portion of the first sleeve portion 212 . . .

Regarding Figures 6 and 12, Paragraphs 0156 and 0158 of the specification are amended to include the specific references 412t and 422t for the “telescoping structures” and Figures 6 and 12 of the drawing is amended to include these references. Figure 12 is a cross-sectional view of another embodiment of a packing cartridge similar to the embodiment shown in Figure 7 (*See, e.g.*, Specification Paragraphs 0076 and 0193), where Figure 7 is a cross-sectional view of another embodiment of a packing cartridge similar to the embodiment shown in Figure 6 (*See, e.g.*, Specification Paragraphs 0068 and

0161). Further support for these amendments is found in the specification regarding Figure 6, for example, in Paragraph 0155:

The packing cartridge 400 further includes, without limitation, a second element 420 comprising a second sleeve portion 422 having at least a portion thereof telescopically positioned in at least a portion of the first sleeve portion 412

In response to the new objection to the drawing in the Final Office Action of June 10, 2009, Applicants respectfully note that a “seat 29” is indicated in Figures 1, 3, 3a, 6, 9, 14a, 15, and 17. Figure 7 is similar to Figure 6 as described in Paragraph 0161, and Figure 12 is similar to Figure 7 as described in Paragraph 0193. In addition, the Replacement Sheet for Figure 12 submitted herewith is amended to indicate seat 29.

No new matter is being added to the application.

Pending Independent Claims Are Patentable over Covert et al.

Independent Claims 1, 65, and 135, as amended, are clarified to require that “the packing cartridge is adapted to be positioned in the packing bore between the seat and the removable gland and so that the squeezing of the first abutment ring and the second abutment ring closer together can be provided by tightening the removable gland over the packing cartridge.”

In contrast, the structure disclosed in Figure 3 of Covert et al. is different. For example, the threads 80 and 82 in that structure are operatively positioned between the nut member 76 and shoulder 52 in a manner that would prevent any such squeezing of those elements co-axially closer together. Part of the reason for this is that Covert et al. does not disclose a “packing cartridge” at all, but, as best understood, Covert et al. discloses a valve packing system, wherein the “bonnet portion 24” (Covert, Figure 1, Column 2, Line 67 – Column 3, Line 1; Figure 3 and Column 3, Lines 53-56) is a part of the valve body 12. Thus, the “bonnet portion 24” (Figure 1) and the “shoulder 52” (Covert et al., Figure 3) are not a packing cartridge that fits into a packing bore. As best understood, Covert et al. does not disclose removing the “bonnet portion 24” or positioning that “bonnet portion 24” in a packing bore. The structure disclosed in Covert et al. is not capable of operating as required by independent Claims 1, 65, or 135.

Regarding dependent Claims 10, 66, and 139, Covert does not disclose a “spacer ring is positioned to help prevent seepage of fluid into any clearances between the first sleeve portion and the second sleeve portion.”

Consideration of the pending claims is respectfully requested.

Conclusion

Applicants' arguments and amendments are without prejudice or disclaimer. Additionally, other distinctions from the cited references may exist, and Applicants reserve the right to discuss any such additional distinctions in a later prosecution response, or in any reissue or reexamination, or in litigation, if appropriate.

The amendment is believed to place the application in condition for allowance, and such action is respectfully requested. If a telephone interview would assist to expedite the application, please contact the undersigned at 214-220-0444.

The Commissioner for Patents is hereby authorized to charge any additional fees relating to this paper or credit any overpayment to Deposit Account No. 50-3037. A duplicate copy of the fee authorization sheet is enclosed for this purpose.

Dated: September 10, 2009

CERTIFICATE OF MAILING

I hereby certify that the enclosed paper is being filed electronically to MAIL STOP RCE, COMMISSIONER OF PATENTS, P. O. BOX 1450, ALEXANDRIA, VA 22313-1450 on:

September 10, 2009

Date of Deposit

Todd E. Albanesi

Printed Name of Person Signing Certificate



Signature

September 10, 2009

Date of Signature

Respectfully submitted,

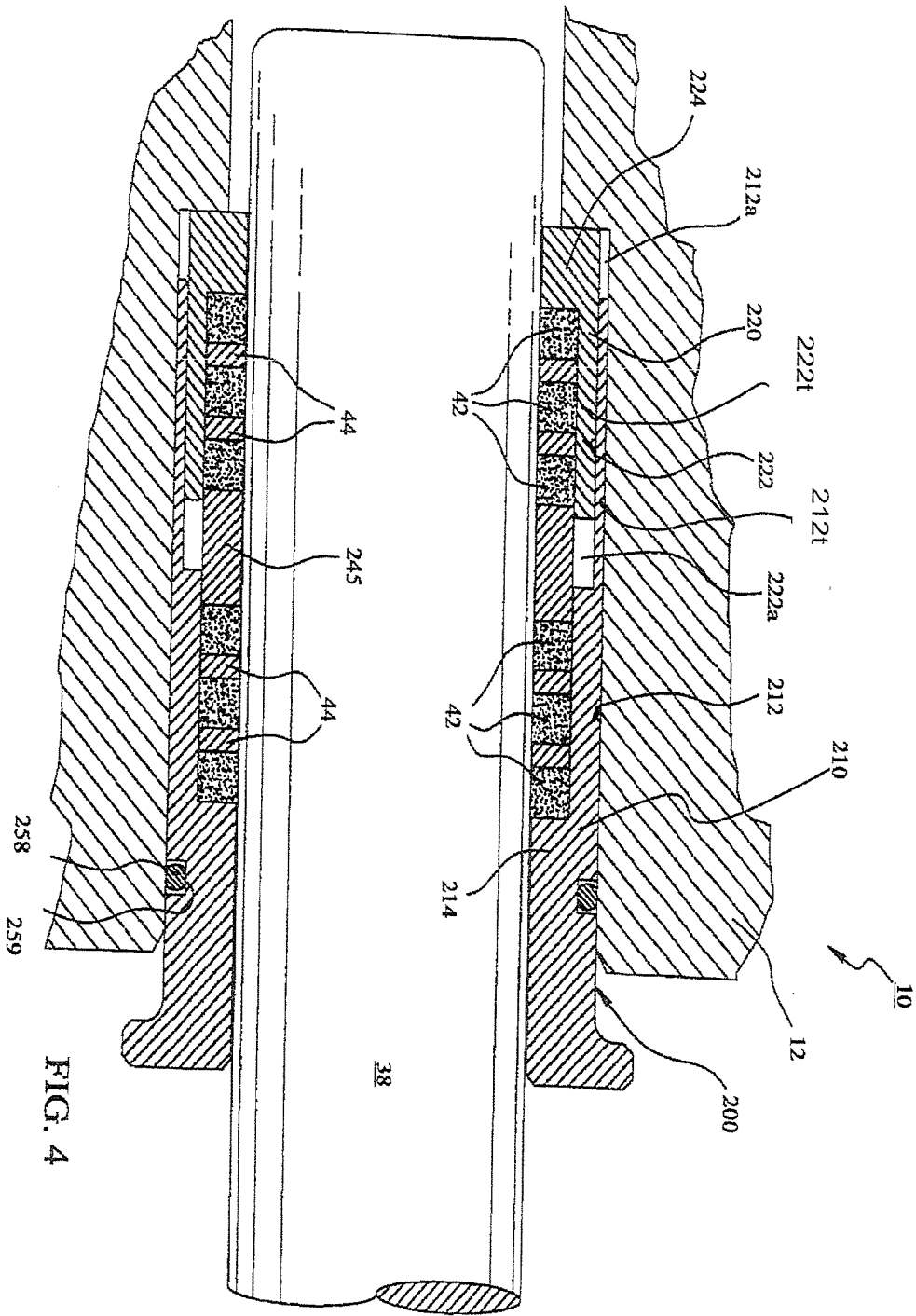


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Attorneys for Applicants

REPLACEMENT DRAWINGS

SERIAL NO.: 10/798,693
ATTORNEY DOCKET NO.: CLPS-18789



REPLACEMENT DRAWINGS

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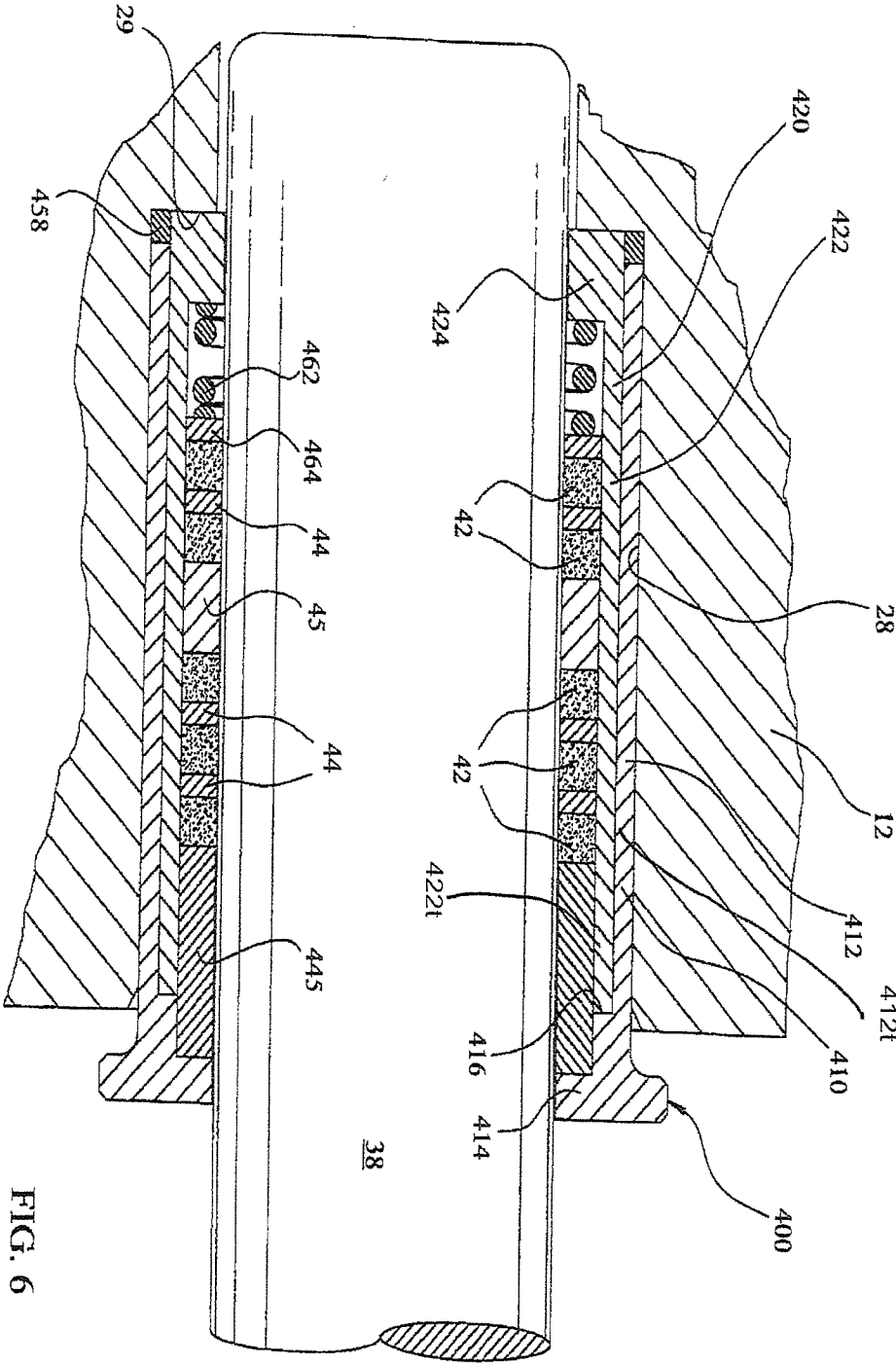


FIG. 6

REPLACEMENT DRAWINGS

SERIAL NO.: 10/798,693
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